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IS 7975-2 (1991): Driving Parts for Hand Operated Square Drive Socket Wrenches, Part 2: Dimensions [PGD 5: Assembly Hand Tools]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
हस्तचालित वर्गाकार ड्राइव सॉकेट रिंचों
के लिए चालन पुर्जे — विशिष्टि

भाग 2 आयाम
(पहला पुनरीक्षण)

Indian Standard

DRIVING PARTS FOR
HAND OPERATED SQUARE DRIVE SOCKET
WRENCHES — SPECIFICATION

PART 2 DIMENSIONS
(*First Revision*)

UDC 621.883.16

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

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Price Group 3

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by Assembly Hand Tools Sectional Committee had been approved by the Production Engineering Division Council.

This standard was first issued in 1976 based on ISO 3315 : 1975. Consequent on its revision of ISO, this standard has been revised. The test torque values have been modified and aligned with revised ISO. Dimensions are in alignment with DIN 3122-1988.

This revised standard is in conformity with ISO 3315-1988 'Assembly tools for screws and nuts — Driving parts for hand operated square drive socket wrenches — Torque testing' issued by International Organization for Standardization (ISO). Assistance has also been derived from DIN 3122-1988 'Driving parts for hand operated squared drive socket wrenches' issued by Deutsches Institut für Normung (DIN).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

DRIVING PARTS FOR HAND OPERATED SQUARE DRIVE SOCKET WRENCHES — SPECIFICATION

PART 2 DIMENSIONS*(First Revision)***1 SCOPE**

This standard covers dimensions for driving parts for hand operated square drive socket wrenches.

IS No.

7214 : 1974

Title

Specification for driving
squares for hand socket
wrenches

2 REFERENCES

2.1 The following Indian Standards are necessary adjuncts to this standard :

IS No.

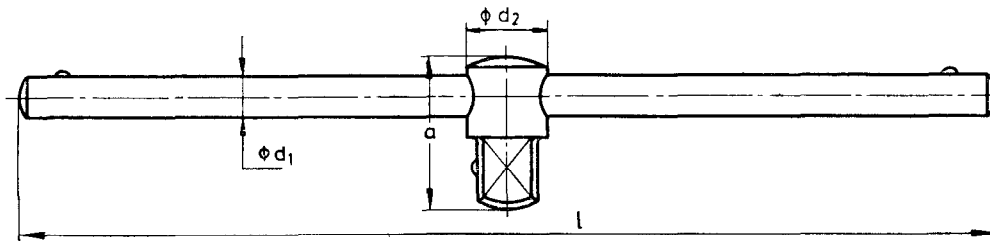
6293 : 1981

Title

Nomenclature of the assembly
tools for nuts and screws
(first revision)

3 NOMENCLATURE

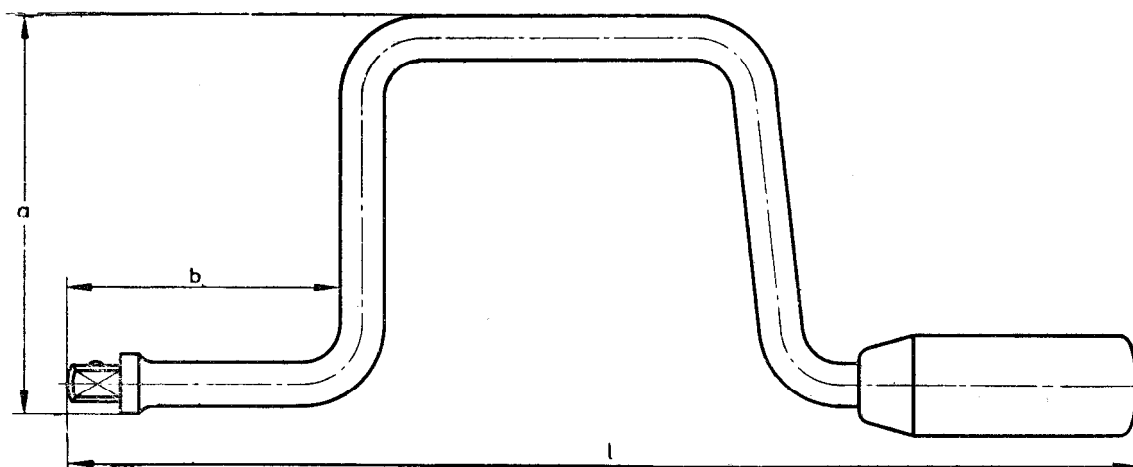
3.1 Nomenclature of hand operated square drive socket wrenches shall be as given in IS 6293 : 1981.

4 DIMENSIONS**4.1 Tee Handle, Square Drive**

All dimensions in millimetres.

Nominal Dimension of Driving Square	<i>a</i> Max	<i>d</i> ₁ Max	<i>d</i> ₂ Max	<i>l</i> Max	Test Torque Min
					Nm
6.3	24	7	14	160	55
10	35	12	23	250	180
12.5	50	14	27	320	455
20	62	20	40	510	1 255
25	80	28	50	760	2 236

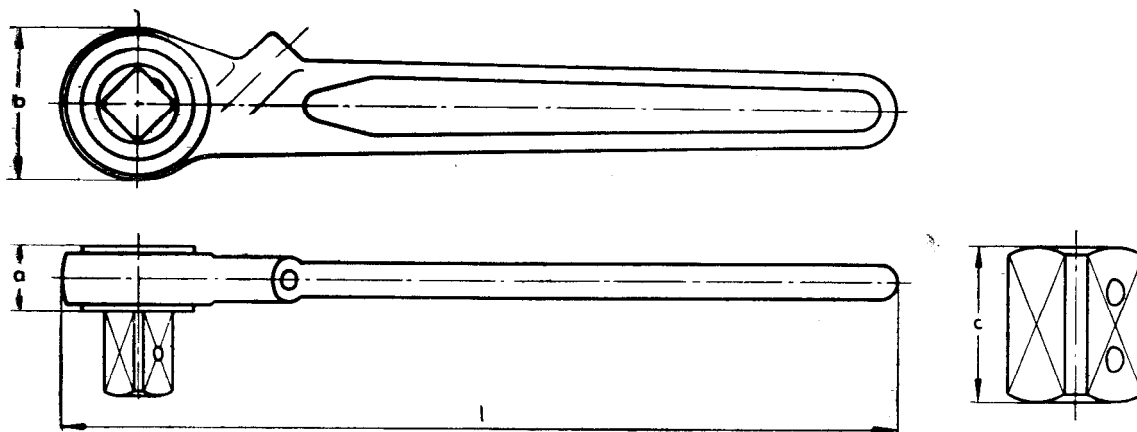
4.2 Speed Brace



All dimensions in millimetres.

Nominal Dimension of Driving Square	<i>a</i> Max	<i>b</i> Max	<i>l</i> Max	Test Torque Min Nm
6.3	90	38	410	24
10	125	40	350	79
10	125	40	470	199
12.5	145	50	350	549
12.5	145	50	500	978

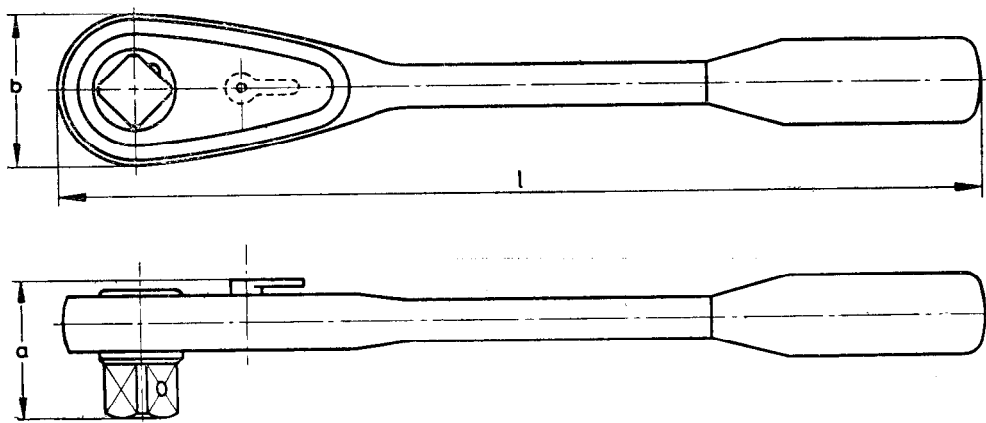
4.3 Ratchet Handle



All dimensions in millimetres

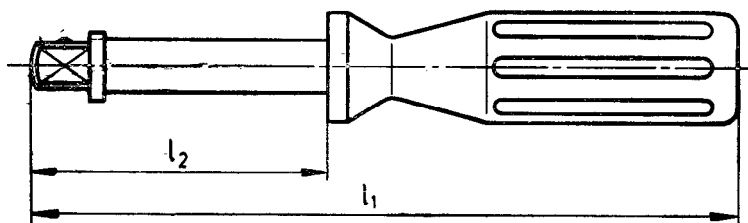
Nominal Dimension of Driving Square	<i>a</i> Max	<i>b</i> Max	<i>c</i> Max	<i>l</i> Max	Swing Angle ¹	Test Torque Min Nm
6.3	12	25	25	150	26°	62
10	14	34	25	200	26°	202
12.5	21	50	38	275	26°	512
20	25	65	52	510	26°	1 412

¹Swing angle between two teeth.

4.4 Ratchet Handle, Reversible

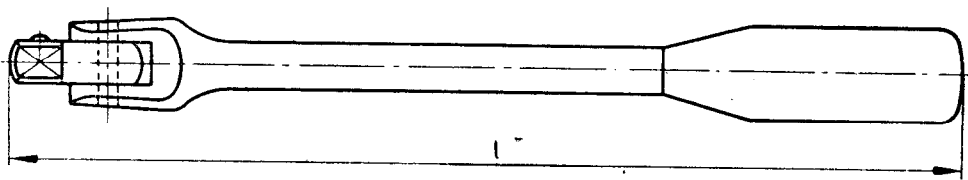
All dimensions in millimetres.

<i>Nominal Dimension of Driving Square</i>	<i>a Max</i>	<i>b Max</i>	<i>l Max</i>	<i>Swing Angle¹</i>	<i>Test Torque Min</i>
					Nm
6.3	24	25	150	20°	62
10	36	35	200	20°	202
12.5	45	50	300	15°	512
20	60	70	630	15°	1 412
25	80	90	900	15°	2 515

¹Swing angle between two teeth.**4.5 Handle, Spin Type, Male Square**

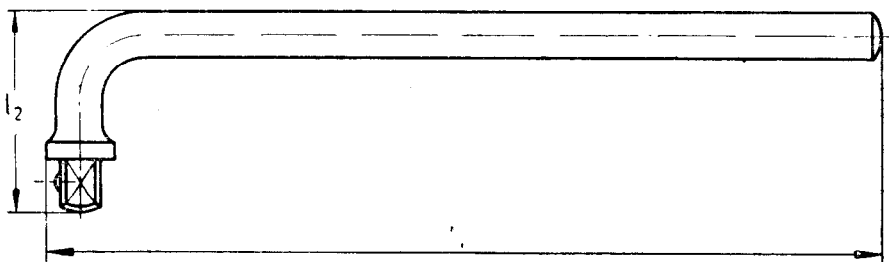
All dimensions in millimetres.

<i>Nominal Dimension of Driving Square</i>	<i>l₁ Max</i>	<i>l₂ Min</i>	<i>Test Torque Min</i>
			Nm
6.3	160	40	10
10	190	40	34

4.6 Nut Spinner, Flex Head

All dimensions in millimetres.

Nominal Dimension of Driving Square	<i>l</i> Max	Test Torque
		Min Nm
6.3	160	62
10	260	202
12.5	250	512
12.5	400	512

4.7 Offset Handle, Square Drive

All dimensions in millimetres.

Nominal Dimension of Driving Square	<i>l</i> ₁ Max	<i>l</i> ₂ Max	Test Torque
			Min Nm
6.3	110	35	62
10	210	45	202
12.5	250	60	512

4.8 Driving square shall be in accordance with IS 7214 : 1974 with a minimum hardness of 382 HV (\approx 39 HRC).

4.9 The illustrations given in 4.1 to 4.7 are diagrammatic only and are not intended to illustrate the details of design.

5 DESIGNATION**5.1 Tee Handle, Square Drive**

A tee handle square drive with nominal dimension of driving square 12.5 mm length 320 mm shall be designated as :

Tee Handle IS 7975 (Part 2) —12.5×320

5.2 Speed Brace

A speed brace with nominal dimension of driving square 10 mm and length 470 mm shall be designated as :

Speed Brace IS 7975 (Part 2) —10×470

5.3 Ratchet Handle

A ratchet handle with nominal dimension of driving square 20 mm shall be designated as :

Ratchet Handle IS 7975 (Part 2)—20

5.4 Ratchet Handle Reversible

A ratchet handle reversible with nominal dimension of driving square 10 mm and length 200 mm shall be designated as :

Ratchet Handle Reversible IS 7975 (Part 2)
—10 × 200

5.5 Handle, Spin Type, Male Square

A handle, spin type, male square with nominal dimension of driving square 6·3 mm shall be designated as:

Handle, Spin Type IS 7975 (Part 2) —6·3

5.6 Nut Spinner, Flex Head

A nut spinner, flex head with nominal dimension of driving square 12·5 mm shall be designated as :

Nut Spinner IS 7975 (Part 2) —12·5

5.7 Offset Handle, Square Drive

An offset handle, square drive with nominal dimension of driving square 10 mm shall be designated as :

Offset Handle IS 7975 (Part 2) —10

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